UNITED STATES PATENT AND TRADEMARK OFFICE

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10/824,761	04/13/2004	Scott William Lockwood	53293.0121	6751

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EXAMINER
JOSHI, SUNITA

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2010*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14 and 15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *10/20/2004 and 07/15/2004*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 12 is objected to under 37 CFR 1.75(c), as being of improper dependent

   form for failing to further limit the subject matter of a previous claim. Applicant is

   required to cancel the claim(s), or amend the claim(s) to place the claim(s) in

   proper dependent form, or rewrite the claim(s) in independent form. Claims 12 is

   identical to Claim 11.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

   obviousness rejections set forth in this Office action:

   (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

   USPQ 459 (1966), that are applied for establishing a background for determining

   obviousness under 35 U.S.C. 103(a) are summarized as follows:

   1.   Determining the scope and contents of the prior art.
   2.   Ascertaining the differences between the prior art and the claims at issue.
   3.   Resolving the level of ordinary skill in the pertinent art.
   4.   Considering objective evidence present in the application indicating
          obviousness or nonobviousness.

4. **Claims 1-5 and 15 are rejected under 35 U.S.C 102 (b) as being anticipated by United States Patent Publication No. (US 20020054689A1) by Zhang et al. in view of United States Patent Application Publication No. (US 20020168075A1) in further view of United States Patent Application Publication No. (20050283263A1 or WO 0154458A2) by Eaton et al.**

As to Claim 1, Zhang teaches *a method for programming a programmable hearing aid* (# 106) *with a configurable hearing aid programmer*(# 102 coupled to client machine 104) *under the control of a computer* (upgrade server machine 108) See at least Figure 1, page 2 [0027])), *the method comprising: starting the computer* (upgrade server machine 108. See at least Figure 1, Figure 3, page 3 [0028], [0029], [0033]) ; *executing hearing aid fitting software on the computer* (See at least pages 2- 3, [0028] , [0029]) ; *obtaining hearing aid fitting parameters at the computer* (step 304, Figure 3, page 3 [0034]). Also see step 508, figure 5, page 4 [0047], [0048]).

displaying the opportunity to download a firmware program to the hearing aid programmer (as once the upgrade server receives the authentication information , it is compared with the stored authentication information, then a decision 512 determines that the user has been verified , and the upgrade processing can continue, page 4-5 [0049], [0050]) ;

Zhang further teaches the software resources are downloaded from remote server to a local client (See at least page 1 [0008]) and *programming the programmable hearing aid with the hearing aid programmer* (as the upgrade sever machine 108 transmits the

appropriate software resources to the client machine 104, which then instructs the

hearing aid programmer 102 to program the hearing aid in accordance with the software

resources. See at least page 3 [0029]). Zhang may not explicitly teach:

downloading a firmware program to the hearing aid programmer in response to an

affirmative response to said displaying, wherein the firmware program configures the

hearing aid programmer to communicate with the programmable hearing aid;

However, Hagen in related field (Programming Hearing aids) teaches a hearing aid

programmer which is dynamically reprogrammed from the computer through PCMCIA

port, and can be used by the hearing aid user to adjust the hearing aid parameters for

changing ambient sound conditions. See at least Hagen on page 2 [0014], [0023] and

page 3 [0023]). At the time of invention, it would have been obvious to one of ordinary

skill in the art to configure the hearing aid programmer dynamically so that the relevant

program can be downloaded to the programmer to program the hearing aid device in

the current acoustic environment (See at least Hagen on page 8 [0097]).

Zhang in view of Hagen may not explicitly teach *downloading hearing aid parameters to*

the hearing aid programmer. However, Eaton in related field (Hearing aid) teaches

server 116 obtains the audiological parameters for the hearing aid system and

communicate them to the mobile device 106 so as to allow the programming of hearing

aid system (See at least page 3[0040]-90044]). At the time of invention, it would have

been obvious to one of ordinary skill in the art to download hearing aid parameters

(audiological parameters) to the hearing aid programmer (mobile device 116) so that the

programmer has the ability to process the recent set of data and is able to synchronize

data. See at least Eaton on page 6 [0077].

As to Claim 2, Zhang in view of Hagen in further view of Eaton teaches a method of

claim 1, and *verifying that a connection between the hearing aid programmer and the*

hearing aid exists prior to said programming (See at least page 1 [0011]).

As to Claim 3, Zhang in view of Hagen in further view of Eaton teaches the limitations

of claim 1, and *coupling the computer to the hearing aid programmer prior to said*

displaying (See at least page 1 [0011]), [page 4 [0047], [0048]).

As to Claim 4, Zhang in view of Hagen in further view of Eaton teaches the limitations

of claim 1, and

coupling the hearing aid to the hearing aid programmer prior to said downloading

hearing aid parameters (See at least page 1 [0011]).

As to Claim 5, Zhang in view of Hagen in further view of Eaton teaches the limitations

of Claim 3, and *coupling the hearing aid to the hearing aid programmer prior to the said*

downloading hearing aid parameters (See at least page 1 [0011]).

As to Claim 15, Zhang teaches *a program storage device readable by a machine,*

tangibly embodying a program of instructions executable by the machine to perform a

method for programming a programmable hearing aid with a configurable hearing aid

programmer comprising(as a computer readable medium including a computer

program code for upgrading a hearing aid device. See at least page 1, [0013])

: starting the computer; executing hearing aid fitting software on the computer; obtaining

heating aid fitting parameters at the computer; (as an upgrade server machine 108

associated with one or more manufacturers of hearing aide devices which

communicates with the client machine 104 through a public network. See at least pages

2- 3 [0028]. Also, the upgrade server machine 108 receives a device description file

which is originally saved at the client device. The device description file has information

pertaining to a programmable hearing aid. See at least page 3 [0038]-[0039]), page 5

[0050], Figure 5).

displaying the opportunity to download a firmware program to the hearing aid

programmer; (as once the upgrade server receives the authentication information , it is

compared with the stored authentication information, then a decision 512 determines

that the user has been verified , and the upgrade processing can continue, page 4-5

[0049], [0050]) *;*

downloading the firmware program to the hearing aid programmer in response to an

affirmative response to said displaying(as continuing the upgrade processing after the

device has been verified, which includes downloading the new software to the device.

See at least page 5, [0050], [0051]. Further, upgrading the hearing aid includes

reprogramming the reprogrammable memory of the hearing aid device. See at least

page 1 [0011], [0012], page 3 [0029], [0035], [0036],, Figure 3). Also, See step 524 on

Figure 5, page 5 [0050]. Zhang also teaches the upgraded data is typically software

resources in the form of programming code that are stored to the programmable hearing

aid device. See at least page 4, [0044]). Zhang further teaches the software resources

are downloaded from remote server to a local client. See at least page 1 [0008]).

Zhang may not explicitly teach *wherein the firmware program configures the hearing aid*

programmer to communicate with the programmable hearing aid;

However, Hagen in related field (Programming Hearing aids) teaches a hearing aid

programmer which is dynamically reprogrammed from the computer through PCMCIA

port, and can be used by the hearing aid user to adjust the hearing aid parameters for

changing ambient sound conditions. See at least Hagen on page 2 [0014], [0023] and

page 3 [0023]). At the time of invention, it would have been obvious to one of ordinary

skill in the art to configure the hearing aid programmer dynamically so that the relevant

program can be downloaded to the programmer to program the hearing aid device in

the current acoustic environment (See at least Hagen on page 8 [0097]).

*and programming the hearing aid with the hearing aid programmer (*as updating the

database containing user information or device characteristics and status information in

step 522 and sending the upgraded data file to the client machine in step 524. See at

least page 5 [0050], figure 5). The client machine can be the client machine 104 and/ or

the hearing aid programming device 102, which is further used to program the hearing

aids 106.

See at least page 3 [0037], also see page 2 [0027]).

Zhang in view of Hagen may not explicitly teach *downloading hearing aid parameters to the hearing aid programmer*. However, Eaton in related field (Hearing aid) teaches server 116 obtains the audiological parameters for the hearing aid system and communicate them to the mobile device 106 so as to allow the programming of hearing aid system (See at least page 3[0040]-90044]). At the time of invention, it would have been obvious to one of ordinary skill in the art to download hearing aid parameters (audiological parameters) to the hearing aid programmer (mobile device 116) so that the programmer has the ability to process the recent set of data and is able to synchronize data. See at least Eaton on page 6 [0077].

5. **Claims 6- 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Publication No. (US 20020054689A1) by Zhang et al. in view of United States Patent Application Publication No. (US 20020168075A1) by Hagen et al.**

As to Claim 6, Zhang teaches a *hearing aid programming system, comprising:*
a computer under the control of hearing aid fitting software(Hearing aid upgrade server machine 108, figure 1, page 3, [0029]).
a hearing aid programmer (# 102 coupled to the client machine 104, figure 1) *coupled to the computer* (upgrade server 108, Figure 1) *and responsive to a firmware program, (*

upgraded software for hearing aid device . See at least Zhang on page 1 [0011]) *the*

firmware program downloadable to the hearing aid programmer only in response to a

user input at the computer (page 3 [0029], as receiving an upgrade request on page 3

[0034], [0035], Figure 3).

the programmable hearing aid (#106, Figure 1) *coupled to the hearing aid programmer*

(# 102, Figure 1)*, the hearing aid programmable with parameters transmitted from the*

computer to the hearing aid programmer(as upgraded data file sent to the client

machine in step 524, figure 5, page 5 [0050]) *and programmed into nonvolatile memory*

of the programmable hearing aid by the hearing aid programmer(as the digital hearing

aids including a non-volatile memory (e.g. EEPROM, FLASH etc) that can be

electronically programmed or rewritten. See at least page 2 [0027]).

the programmable hearing aid (#106, Figure 1) *coupled to the hearing aid programmer*

(# 102, Figure 1)*, the hearing aid programmable with parameters transmitted from the*

computer to the hearing aid programmer(as upgraded data file sent to the client

machine in step 524, figure 5, page 5 [0050]) *and programmed into nonvolatile memory*

of the programmable hearing aid by the hearing aid programmer(as the digital hearing

aids including a non-volatile memory (e.g. EEPROM, FLASH etc) that can be

electronically programmed or rewritten. See at least page 2 [0027]).

Zhang may not explicitly teach *wherein the firmware program configures the hearing aid*

programmer to communicate with the programmable hearing aid;

However, Hagen in related field (Programming Hearing aids) teaches a hearing aid

programmer which is dynamically reprogrammed from the computer through PCMCIA

port, and can be used by the hearing aid user to adjust the hearing aid parameters for

changing ambient sound conditions. See at least Hagen on page 2 [0014], [0023] and

page 3 [0023]). At the time of invention, it would have been obvious to one of ordinary

skill in the art to configure the hearing aid programmer dynamically so that the relevant

program can be downloaded to the programmer to program the hearing aid device in

the current acoustic environment (See at least Hagen on page 8 [0097]).

As to Claim 7, Zhang in view of Hagen teaches the limitations of Claim 6, and the

parameter memory associated with the hearing aid programmer for receiving and

storing the parameters (as the device description file saved on the client machine and is

retrieved by the upgrade server. See at least Figure 4A, page 5 [0050]).

As to Claim 8, Zhang in view of Hagen teaches the limitations of Claim 7, and as the

hearing aid programming device 102 combined with the client device 104 receives the

upgraded data file from the upgrade server. See at least page 2 [0027], page 5 [0050]).

Further, the hearing aid programmer then upgrades the hearing aid based on the

upgraded data, the upgraded data is typically software resources in the form of

programming code that are stored to the programmable hearing aid device. See at least

page 1 [0011], page 5, [0050], page 4 [0044]). Zhang do not explicitly teach *a firmware*

memory associated with the hearing aid programmer for receiving and storing the

firmware program. However, Hagen in related field (Programmable Hearing Aid)

teaches a programmable hearing aid programmer 252, having a memory system 272

for storage of hearing aid programming software during the hearing aid programming

operation. See at least page 6 [0065] Figure 6). At the time of invention, it would have

been obvious to one of ordinary skill in the art to store the hearing aid programming

software in a non volatile memory of the hearing aid programmer to be immediately

available without downloading. See at least page 2, [0019]).

As to Claim 9, Zhang in view of Hagen teaches the limitations of Claim 8, and *a*

computer interface for providing an electrical and data communications interface

between the computer and the hearing aid programmer (#254, Figure 6 on Hagen)

As to Claim 10, Zhang in view of Hagen teaches the limitations of Claim 9, and *a*

hearing aid interface for providing an electrical and data communications interface

between the hearing aid programmer and the hearing aid (#274 on Figure 6 on Hagen)

As to Claim 11, Zhang in view of Hagen teaches the limitations of Claim 10 and *the*

computer interface complies with the Universal Serial Bus 1.0, 1.1 and 2.0 standard

protocol (as PCMCIA interface 254, Figure 6 on Hagen)

As to Claim 12, Zhang in view of Hagen teaches the limitations of Claim 11, and *the*

computer interface complies with the Universal Serial Bus 1.0, 1.1 and 2.0 standard

protocol (as PCMCIA interface 254, Figure 6 on Hagen)

As to Claim 14, Zhang teaches an *apparatus for programming a hearing aid* (See

abstract, Figure 1) *, comprising:*

computer means for executing hearing aid fitting software and capturing patient-specific

parameters (as the hearing aid upgrade server 108, Figure 1 which receives device

information on the hearing aid device to be upgraded. See at least Figure 3, step 304,

page 3 [0033]-[0035]). *;*

hearing aid programmer means(# 102 , Figure 1) *responsive to said computer means (*

108 Figure 1). Zhang teaches the hearing aid upgrade server 108 is in communication

with the client machine 104 coupled to the hearing aid programmer. Also, the client

machine and the hearing aid programming device can be combined into a single unit.

See at least page 2 [0027], [0029], [0037]) *and to a firmware program for receiving*

parameters from said computer means and programming the parameters into the

hearing aid (as the upgrade sever machine 108 transmits the appropriate software

resources to the client machine 104, which then instructs the hearing aid programmer

102 to program the hearing aid in accordance with the software resources. See at least

page 3 [0029]).*and*

user interface means for obtaining a command from a user prior to downloading the

firmware program from said computer means to said hearing aid programmer means (

as the upgrade server 108 receives a request from a user to upgrade software for the

hearing aid device. See at least page 2 [0016], page 3 [0034], Figure 3 step 302).

Zhang may not explicitly teach *wherein the firmware program configures the hearing aid programmer to communicate with the programmable hearing aid;*

However, Hagen in related field (Programming Hearing aids) teaches a hearing aid programmer which is dynamically reprogrammed from the computer through PCMCIA port, and can be used by the hearing aid user to adjust the hearing aid parameters for changing ambient sound conditions. See at least Hagen on page 2 [0014], [0023] and page 3 [0023]). At the time of invention, it would have been obvious to one of ordinary skill in the art to configure the hearing aid programmer dynamically so that the relevant program can be downloaded to the programmer to program the hearing aid device in the current acoustic environment (See at least Hagen on page 8 [0097]).

Response to Arguments

Applicant's arguments with respect to claims 1-12. 14 and 15 have been considered but are moot in view of the new ground(s) of rejection. Newly amended independent claims 1, and 15 are now rejected under 35 U.S.C 103(a) as being unpatentable over Zhang (US 20020054689A1) in view of Hagen (US 20020168075A1) in further view of Eaton (US 20050283263A1).

Newly amended independent claims 6 and 14 are rejected under 35 U.S.C 103(a) as being unpatentable over Zhang (US 20020054689A1) in view of Hagen (US 20020168075A1.

All other claims variably depend from the independent claims 1, 6 and 14 stay rejected under U.S.C 103(a). Please refer to the detailed office action above.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to SUNITA JOSHI whose telephone number is (571)270-

7227. The examiner can normally be reached on Monday thru Friday 8.00AM --

5.00P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Curtis Kuntz can be reached on 5712727499. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:

> Commissioner of Patents and Trademarks
> P.O. Box 1450
> Alexandria, Va. 22313-1450

Or faxed to:

> (571) 273-8300, for formal communications intended for entry and for
> informal or draft communications, please label "PROPOSED" or "DRAFT".
> Hand-delivered responses should be brought to:

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> Randolph Building
> 401 Dulany Street
> Arlington, VA 22314

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SUNITA JOSHI/

Examiner, Art Unit 2614

June 1, 2010